ABSTRACT

The gait-locomotor apparatus of the present invention is a device for overcoming impeded locomotion in humans and is aimed at enabling people with handicapped lower limbs to walk. The gait-locomotor apparatus that is wore on a disabled user comprises a brace having a plurality of jointed segments that are adapted to fit the lower body of the disabled user and propulsion means that is adapted to provide relative movement between the plurality of jointed segments. The gait-locomotor apparatus further comprises at least one sensor adapted to monitor the angular position of at least one of the plurality of jointed segments and a control unit that is adapted to supervise the propulsion means and to receive feedback information from the sensors so as to facilitate the brace to perform walking patterns. The disabled user that wears the gait-locomotor apparatus of the present invention is able to steadily stand in a stance position supported by the brace, and is able to walk in various walking patterns using the control unit while fully participating in the process.